

STATUS OF THE CLAIMS

Claims 1-20 were originally filed in this patent application. In this amendment, claims 1, 4, 6, 7, 10, 13 and 18 have been amended. Claims 2, 3, 9, 11, 12 and 16-17 have been cancelled herein. Claims 21-23 have been added. Claims 1, 4-8, 10, 13-15 and 18-23 are currently pending.

REMARKS

Provisional Rejection of claims 1-20 under judicially created doctrine of obviousness-type double patenting

The Examiner provisionally rejected claims 1-20 under judicially created doctrine of obviousness-type double patenting over claims 1, 7, 9 and 12-14 of copending Application No. 09/865,001 (Blais et al.) in view of Whaley et al., "Compositional Pointer and Escape Analysis for Java Programs". If it becomes necessary, applicant will file a terminal disclaimer to overcome this rejection.

Rejection of claims 1, 4-8, and 10-15 under 35 U.S.C. §103(a)

The Examiner rejected claims 1, 4-8, and 10-15 under 35 U.S.C. §103(a) as being unpatentable over Whaley et al., "Compositional Pointer and Escape Analysis for Java Programs" in view of Holzle et al. (US 6,237,141). Applicant traverses the Examiner's finding of obviousness of the claims as amended.

Claim 1

Claim 1 has been amended herein to recite the additional limitations of former claims 2 and 3. The cited art does not teach or suggest claim 1 as amended. In rejecting former claim 3, the Examiner cited Whaley for the teaching of “analyzing each class as it is loaded to determine whether the newly-loaded class affects the allocation of an object” and if so “changing object allocation to the heap.” The cited portion of Whaley describes allocating on the stack if the object does not escape. The examiner also quoted the sentence “Instead of being processed by the collector, the object will be implicitly collected when the method returns and the stack rolls back.” This portion of Whaley, and Whaley in general does not teach or suggest “analyzing each class as it is loaded to determine whether the newly-loaded class affects the allocation of an object” and if so “changing object allocation to the heap.” Changing the allocation of the object to the heap as claimed above is not the same as removing it during garbage collection or putting it on the stack if it escapes. Applicants believe the Examiner has mis-characterized the cited art, and the claims as amended are now in condition for allowance. Reconsideration is respectfully requested.

Claim 4

Claim 4 has been amended herein to change it to an independent claim by incorporating the limitations of former claim 1. The cited art does not teach or suggest claim 4. In rejecting claim 4, the Examiner cited Whaley for the teaching of “changing object allocation to the heap as more information becomes available.” The cited portion of Whaley describes allocating on the stack if the object does not escape. The examiner also quoted the sentence “Instead of being processed by the collector, the object will be implicitly collected when the method returns and the stack rolls back.” This portion of Whaley, and Whaley in general does not teach or suggest “changing object allocation to the heap as more information becomes available” in combination with the other claimed

features. Changing the allocation of the object to the heap as claimed above is not the same as removing it during garbage collection or initially allocating the object on the heap if it escapes. Applicants believe the Examiner has mis-characterized the cited art, and the claims as amended are now in condition for allowance. Reconsideration is respectfully requested.

Claim 5

Claim 5 depends on independent claim 4 amended as described above, which is allowable for the reasons given above. As a result, this claim is allowable as depending on an allowable independent claim.

Claim 6

Claim 6 has been amended herein to include the limitations of former claim 4. The cited art does not teach or suggest claim 6 as amended. In rejecting former claim 4, the Examiner cited Whaley for the teaching of “changing object allocation to the heap as more information becomes available.” The cited portion of Whaley describes allocating on the stack if the object does not escape. The examiner also quoted the sentence “Instead of being processed by the collector, the object will be implicitly collected when the method returns and the stack rolls back.” This portion of Whaley, and Whaley in general does not teach or suggest “changing object allocation to the heap as more information becomes available” in combination with the other claimed features. Changing the allocation of the object to the heap as claimed above is not the same as removing it during garbage collection or initially allocating the object on the heap if it escapes. Applicants believe the Examiner has mis-characterized the cited art, and the claims as amended are now in condition for allowance. Reconsideration is respectfully requested.

Claim 7

Claim 7 has been amended herein to include the limitations of former claim 3 and 9. The cited art does not teach or suggest claim 7 as amended. In rejecting former claim 3, the Examiner cited Whaley for the teaching of “analyzing each class as it is loaded to determine whether the newly-loaded class affects the allocation of an object” and if so “changing object allocation to the heap.” The cited portion of Whaley describes allocating on the stack if the object does not escape. The examiner also quoted the sentence “Instead of being processed by the collector, the object will be implicitly collected when the method returns and the stack rolls back.” This portion of Whaley, and Whaley in general does not teach or suggest “analyzing each class as it is loaded to determine whether the newly-loaded class affects the allocation of an object” and if so “changing object allocation to the heap.” Changing the allocation of the object to the heap as claimed above is not the same as removing it during garbage collection or initially allocating the object on the heap if it escapes. Applicants believe the Examiner has mis-characterized the cited art, and the claims as amended are now in condition for allowance. Reconsideration is respectfully requested.

Claims 8

Claim 8 depends on independent claim 7 amended as described above, which is allowable for the reasons given above. As a result, claim 8 is allowable as depending on an allowable independent claim.

Claim 10

Claim 10 has been amended herein to include the limitations of former claim 11. The cited art does not teach or suggest claim 10 as amended. The rejection of former claim 11 was referenced to the rejection of claim 4. In rejecting former claim 4, the

Examiner cited Whaley for the teaching of “changing object allocation to the heap as more information becomes available.” The cited portion of Whaley describes allocating on the stack if the object does not escape. The examiner also quoted the sentence “Instead of being processed by the collector, the object will be implicitly collected when the method returns and the stack rolls back.” This portion of Whaley, and Whaley in general does not teach or suggest “changing object allocation to the heap as more information becomes available” in combination with the other claimed features. Changing the allocation of the object to the heap as claimed above is not the same as removing it during garbage collection or initially allocating the object on the heap if it escapes. Applicants believe the Examiner has mis-characterized the cited art, and the claims as amended are now in condition for allowance. Reconsideration is respectfully requested.

Claims 11

Claim 11 has been cancelled.

Claims 12

Claim 12 has been cancelled.

Claim 13

Claim 13 has been amended herein to recite the limitations of former claims 16, and 17. The rejection of former claim 17 was referenced to the rejection of claim 3. The cited art does not teach or suggest claim 13 as amended for the reasons stated above with regards to claim 1.

Claims 14-15

Claims 14-15 depend on independent claim 13 amended as described above, which is allowable for the reasons given above. As a result, these claims are allowable as depending on an allowable independent claim.

Rejection of claims 2-3, 9 and 16-20 under 35 U.S.C. §103(a)

The Examiner rejected claims 2-3, 9 and 16-20 under 35 U.S.C. §103(a) as being obvious over Whaley et al., “Compositional Pointer and Escape Analysis for Java Programs” in view of Holzle et al. (US 6,237,141) and in further view of Choi et al., “Escape Analysis for Java”. Applicant traverses the Examiner’s finding of obviousness of the claims as amended.

Claims 2-3, 9 and 16-17

Claims 2-3, 9 and 16-17 have been cancelled.

Claim 18

Claim 18 has been amended herein to recite the limitations of former claim 4. The cited art does not teach or suggest claim 18 as amended for the reasons stated above with regards to claim 4.

Claims 19-20

Claims 19-20 depend on independent claim 18 amended as described above, which is allowable for the reasons given above. As a result, these claims are allowable as depending on an allowable independent claim.

New claims 21-23

Claims 21 through 23 have been added. Claim 21 is similar in scope to claim 4 and allowable for the reasons as stated for claim 4 above. Basis for the claims can be found in claims 4, 18-21, and throughout the specification. Examination is respectfully requested.

Conclusion

In summary, none of the cited prior art, either alone or in combination, teach, support, or suggest the unique combination of features in applicant's claims presently on file. Therefore, applicant respectfully asserts that all of applicant's claims are allowable. Such allowance at an early date is respectfully requested. The Examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case.

Respectfully submitted,

By 

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